protected from severe stem rust (Puccinia graminis) infection to small grain crops. This plant disease control project was maintained by a two-man crew, using only 10% of their work time.

While performing eradication and survey work, a total of 9,300 barberries was destroyed on 22 square miles (14,080 acres) in the control areas of Monroe, Greenbrier and Summers Counties.

In cooperation with the Federal Rust Laboratory at the University of Minnesota, 150 barberry and small grain field examinations were made in regard to the stem and leaf rust diseases. Forty-eight barberry and small grain stem and leaf rust specimen collections were made and mailed to the rust laboratory.

The crew of this section spent 80% of its work time performing a diversity of other insect, disease and plant control and survey projects for other program sections. Extensive insect, disease and weed surveys were carried out on the major agricultural crops in the southeastern part of the state. Thistle natural enemy surveys were conducted and beneficial insects found were collected and redistributed. White pine blister rust (Cronartium ribicola) areas were reexamined for possible recurrence of the disease.

Cooperative Forest Pest Action (CFPA) - The Gypsy Moth Program continued to account for more hours than all other pest problems combined. Seven full-time employees worked continuously on gypsy moth egg mass surveys, the treatment program, treatment monitoring, and general detection surveys for gypsy moth larvae and pupae. The two remaining full-time employees in the CFPA Program devoted varying amounts of time to gypsy moth and the remainder of their time to native insect and disease surveys and related matters.

The pheromone trapping program for male moths in 1988 produced catches in 37 counties outside the area in the Eastern Panhandle considered generally infested. The catches in Raleigh County were, collectively, a new county record.

The gypsy moth suppression project was completed in May and June, with the treating of 74,766 acres in Jefferson, Berkeley, Morgan, Hampshire, Mineral, Hardy, Grant and Preston Counties. The cost of the spray material and the aerial contract was $4.78 per acre. The Cooperative State-County-Landowner Gypsy Moth Suppression Program, which was initiated (due to lack of state funds) to allow landowners to participate in the State's treatment program, contributed the bulk of the acreage to the project. This program accounted for 51,039 acres of the total treatment area. The remaining 23,727 acres were treated in the AIPM Project area with 100% Federal funds.

Aerial flights in June and July, 1989 revealed 86,736 acres of gypsy moth defoliated forest land. The defoliation acreage was broken down by county as follows: Mineral - 27,055, Hampshire - 23,195, Hardy - 16,379, Grant - 7,418, Preston-6,577, Morgan - 3,319, and Berkeley - 2,793.

The Appalachian Gypsy Moth Integrated Pest Management (AIPM) Demonstration Project, which was begun in May 1988, currently employs 19 full-time personnel and 21 part-time personnel for egg mass surveys, male moth pheromone trapping, suppression activities, and mescellaneous other project work.

Approximately 23,727 acres were treated in the AIPM Project in May and June, 1989. Defoliation occurred over 9,522 acres of forested land in the northern part of the project area. Additionally, an isolated infestation of gypsy moth was found at Athens in Mercer County, which is in the southern area of the project.

The principal native insects active this year included: eastern tent caterpillar, yellow poplar weevil, locust leafminer, Virginia pine sawfly, elm leaf beetle and the looper complex.

The forest pathologist spent a good deal of program time on a dogwood anthracnose survey conducted in 16 eastern and southern counties in the state. A 50% cost sharing focused funding grant of $9,000.00 was provided by the U.S. Forest Service, State and Private Forestry, to conduct the survey. The competitive grant funds were used to purchase materials and help pay salaries for part-time help for the survey. A driving survey was conducted and impact plots were set up in the 16-county area. Dogwood anthracnose was detected in each county.

Other foliage diseases of significance this year included sycamore anthracnose disease, which was widespread and severe throughout the state. White oak anthracnose disease incidence was light to moderate, while white ash anthracnose disease incidence was light throughout the state.

Oak decline continued to be a problem in woodlots and forests throughout the state. Investigations into this problem were conducted in Braxton and Summers Counties. Yellow poplar mortality, possibly caused by drought, was observed in Wood and Kanawha Counties.

General surveys and investigations turned up a number of problems in Christmas tree stands throughout the state. The most significant problem occurred in a Jefferson County plantation, where 75% of a planting of Douglas-fir trees was either dead or dying. The suspected cause was Phytophthora root rot disease. After further investigation, the problem was identified as a misapplication of the herbicide Velpar. Losses in excess of

$50,000.00 were incurred by the grower. Problems in other Christmas tree plantations of significance included Lophodermium needlecast and mouse damage.

West Virginia Department of Agriculture Library - Currently, the library's holdings include 5,040 books, 860 bound periodical volumes, 710 pamphlets, which have been computerized, and 225 boxes of other pamphlets and technical papers.

Significant progress was made this year on computerizing the backlog of pamphlets, but there is a substantial number remaining to be done to complete organization of these.

Time was finally taken to complete the organization of the Animal Health Division branch library. Books were sorted and classified, journal binding was finished and all non-book material was organized, boxed and shelved.

To facilitate the transition from a part-time librarian to a full-time one, a thorough review of the entire library was conducted.

Nursery Inspection and Registration - There were 173 nurseries and 393 nursery dealers registered to sell nursery stock in the state this year. Inspections were conducted at 207 nurseries and nursery dealer establishments, which resulted in approximately one acre of field grown nursery stock and 737 individual pieces of nursery stock being placed under stop sale orders, because of injurious insects and plant diseases.

Twenty-three violations of the West Virginia Plant Pest Act were discovered during the year. All involved nurseries and nursery dealers selling nursery stock without a valid certificate of registration.

Federal and interstate regulatory work included seven shipments of houseplants being inspected and certified for out-of-state movement, plus one shipment of cut Christmas trees being inspected and certified as free of gypsy moth for shipment from Jefferson County, West Virginia to Florida.

Pest Identification Laboratory (PIL) - The total number of identified insect specimens in the Reference Insect Collection stood at 27,772, compared to 22,285 at the end of the previous fiscal year, or an increase of 25 percent.

Six more Cornell cabinets were added this year, bringing the capacity of the collection to 30 cabinets with 360 drawers.

Specialists assisting in identification of Reference Insect Collection material have identified 583 asilid flies and 114 scolytid beetles this year. This resulted from a reciprocal